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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,326	02/07/2006	Shoji Sekino	NEC NE70217	6649
27667	7590	08/11/2009	EXAMINER	
HAYES SOLOWAY P.C. 3450 E. SUNRISE DRIVE, SUITE 140 TUCSON, AZ 85718			ENIN-OKUT, EDU E	
			ART UNIT	PAPER NUMBER
			1795	
			NOTIFICATION DATE	DELIVERY MODE
			08/11/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	<p>Application No. 10/567,326</p>	<p>Applicant(s) SEKINO ET AL.</p>	
	<p>Examiner Edu E. Enin-Okut</p>	<p>Art Unit 1795</p>	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 July 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: _____.
- Claim(s) objected to: _____.
- Claim(s) rejected: 1,3,4 and 6-11.
- Claim(s) withdrawn from consideration: 2 and 5.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☒ Other: See Continuation Sheet.

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795

/Edu E. Enin-Okut/
Examiner, Art Unit 1795

Continuation of 3. NOTE: The amended filed July 28, 2009 does NOT place the application in condition for allowance because:

Claim 7, as amended, would be rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 recites the limitation "said elastic film". There is insufficient antecedent basis for this limitation in the claim.

Claim 1, as amended, would be rejected under 35 U.S.C. 103(a) as being unpatentable over Horiba et al. (US 4,493,878) in view of Yonetsu et al. (US 7,147,950). Additional supporting evidence provided by Prasad et al. (US 2006/0256176).

Regarding claim 1 as amended, Horiba teaches a fuel supplier placed in a fuel supply system of a fuel cell (2:30-64; Claim 1), including a fuel vessel [cartridge 2]; a permeation control film coupled to the fuel vessel [net-like substrate material (net) 3 provided in a portion of the cartridge 2]; and, a supplementary fuel [fuel element 1] contained in the fuel vessel (Figs. 1, 2; 2:30-37; Claim 2).

As to the supplementary fuel contained in the fuel vessel being restrictively transmitted through the permeation film to the fuel cell, or allowing the supplementary fuel to move to the fuel supply system through the permeation control film, these limitations have been considered, and construed as a functional limitation that adds no additional structure to the fuel supplier. See MPEP 2114. However, because the fuel supplier of Horiba is structurally similar to that instantly disclosed, it appears capable of functioning as claimed.

Horiba teaches that its permeation control film is composed of polypropylene net (4:1-2). One of ordinary skill would appreciate that polypropylene can swell when exposed to substances such as methanol (see Prasad, para. 14, 16, 17). That artisan would also appreciate that the amount of swelling of the polypropylene is dependant upon how much of that substance it is exposed to (i.e., the concentration of the substance in a solution). Further, the swelling of a polypropylene net like that taught by Horiba will expand the fibers forming the net, changing its shape and reducing the void volume of the net; thus, restricting the amount of fuel (e.g., methanol-containing fuel) flowing through the net.

Therefore, one of ordinary skill in the art at the time of the invention would have found it obvious to use the ability of the polypropylene net of Horiba to respond (i.e., change its shape) to exposure to liquid fuels, such as methanol, to restrict the amount of fuel supplied by its fuel supplier without adding additional control equipment; thus, achieving a compact fuel cell device (see Horiba, 3:44-46).

Horiba does not expressly teach that a shutter member is placed on the fuel permeable film.

Yonetsu teaches a fuel cell with fuel tank 1 having a cylindrical lid 31, which can be opened or closed, is slidably mounted around the fuel outlet port 12 of a liquid fuel tank 1, and a permeating material connecting pad 32 is mounted to the inner wall of the pathway 3 (10:38-43; Figs. 9A, 9B). When the liquid fuel tank 1 is connected to a pathway 3, the lid 31 is pushed upward so as to bring the outlet port of the tank into contact with the permeating material connection pad (10:43-47). When the fuel outlet port is brought into contact with the permeating material connecting pad, the liquid fuel is transferred from the tank into the pathway by the capillary action (10:48-51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a shutter member in the fuel supplier of Horiba, as taught by Yonetsu, in order to further control the flow of fuel from the fuel supplier to a fuel cell (see Yonetsu, 10:43-47).

As to the shutter member controlling an exposed area of said fuel permeable film; or, that the shutter member slides on the surface of the surface of the film such that the exposed area of the film is controlled, these limitations have been considered, and construed as a functional limitations that add no additional structure to the shutter member. See MPEP 2114. However, because the shutter member of Horiba, as modified by Yonetsu, is structurally similar to that instantly disclosed, it appears capable of functioning as claimed.

As to applicant's arguments with respect to Yonetsu reference, it should be noted that, during patent examination, the pending claims must be given the broadest reasonable interpretation consistent with the specification. In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Prater, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969). See also MPEP 2111 - 2111.01. Limitations from the specification are not read into the claims. In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In addition, it should be also noted that "[t]he use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including non-preferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); Upsher-Smith Labs. v. Pamlab, LLC, 412 F.3d 1319, 1323, 75 USPQ2d 1213, 1215 (Fed. Cir. 2005) (reference disclosing optional inclusion of a particular component teaches compositions that both do and do not contain that component). See MPEP 2123 (I).

In this case, one would appreciate that a "shutter" is defined as "one that shuts" (see "shutter" on Merriam-Webster's Online Dictionary). Further, as discussed in previous Office Action, Yonetsu teaches a slidably mounted lid that controls the flow of fuel from a fuel tank (see discussion of Yonetsu reference on p. 5 of the Final Office Action issued on May 27, 2009).

Continuation of 13. Other: Attachment - "Shutter" from Merriam-Webster's Online Dictionary.